APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,611	07/31/2003	Peter G. Webb	10021295-1	5564

7590 07/14/2006	EXAMINER

AGILENT TECHNOLOGIES, INC.
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EXAMINER
MILLER, MARINA I

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 May 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-7,10-13 and 41-55* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-7,10-13 and 41-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 04/07/2006 and 05/08/2006 have been entered.

Claims 1, 5-7, 10-13, and 41-55 are pending.

Claims 2-4, 8-9, and 14-40 are cancelled.

Claims 1, 5-7, 10-13, and 41-55 presently are under examination.

Applicants' arguments have been fully considered. Rejections and/or objections not

reiterated from previous office actions are hereby withdrawn. The following rejections and/or

objections are applied.

Claim Rejections - 35 USC § 101

Non-Statutory Subject Matter

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 5-7, 10-13, and 41-55 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claim 1 is directed to a method comprising steps of providing a test request, retrieving an

instruction from the plurality of instructions stored in a memory, and reading or processing

signal data. However, not all processes are statutory under 35 U.S.C. 101. *See Interim Guidelines*

for Examination of Patent Applications for Patent Subject Matter Eligibility. 1300 O.G. 4, on 22

November 2005 (published at the USPTO web site

http://www.uspto.gov/web/patents'patog/week47/OG/TOC.htm). To satisfy 101 requirements,

the claim must be for a practical application, which can be met if the claimed invention

"transforms" an article or physical object to a different state or thing OR the claimed invention

otherwise produces a useful, concrete, and tangible result. If claims are directed to abstract ideas

(such as mathematical algorithms), natural phenomena, and laws of nature, the claims must be

considered as a whole for determining whether abstract ideas, natural phenomena, or laws of

nature have a particular application.

In the instant case, the claimed method does not transform or reduce an article or a

physical object (*e.g.*, signals) to a different stage or thing because the "result" of the method (*i.e.*,

acquired signals) is merely data (*e.g.*, hybridization data) and is not equivalent to a physical

transformation. The claims do not recite tangible expression (*i.e.*, real-world result) of reading or

processing signal data in a form useful to one skilled in the art. Thus, the method does not recite

steps of producing something that is concrete, useful, and tangible, and is not statutory.

Lack of Utility

Claims 1, 5-7, 10-13, and 41-55 are rejected under 35 U.S.C. 101 because the claimed

invention lacks patentable utility.

Claim 1 is directed to a method comprising steps of providing a test request for reading or

processing signal data from a sub-array of probes on an array, retrieving an instruction from a

memory, and reading or processing the signal data for the sub-array using the retrieved

instructions. The specification on page 3 discloses that the instant invention is useful for

acquiring data from feature locations on an array which are relevant to a request and avoiding

acquiring data which is irrelevant to the requested test.

A method of identifying and reading only that portion of an array deemed to be

"relevant" may have a substantial utility. However, the specification does not disclose any

specific utility for the invention. Specifically, the "result" of the claimed method is random

signal data, wherein it is not known what the signal data represent (*i.e.*, what the results actually

are). Reading a specific part of an array does not grant specificity to the result of the instant

method. In order for the result of the method to be useful, one skilled in the art must be aware of

what the acquired signal data represent. Absent any disclosure for instructions, processing, array,

probes, *etc.*, the asserted utility is not specific. No such information is recited in the instant

claims. Applicant is reminded that a "use" to perform further research is not a utility under 35

U.S.C. 101. For the reasons set forth above, the invention lacks a specific utility, and therefore

lacks a patentable utility.

Claim Rejections - 35 USC § 112

First Paragraph

Enablement

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claims 1, 5-7, 10-13, and 41-55 are also rejected under 35 U.S.C. 112, first paragraph.

Specifically, since the claimed invention is not supported by either a specific, substantial and

useful asserted utility or a well established utility for the reasons set forth above, one skilled in

the art clearly would not know how to use the claimed invention.

Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5-7, 10-13, and 41-55 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1 recites the limitation "the chemical array" in line 3. There is insufficient

antecedent basis for this limitation in the claim. Claim 1 does not recite "a chemical array" in

lines 1-2. As the intended limitation is not clear, claim 1 is indefinite. Claims 5-7, 10-13, and 41-

55 depend from claim 1, and are therefore indefinite.

Claim 1 recites a step of "reading ... signal data for the sub-array instructed by the

retrieved instruction." It is not clear what is "instructed" by the retrieved instruction, *i.e.*,

"reading" or "the sub-array." Specifically, it is not clear whether the limitation requires a specific

manner of reading signal data OR requires reading a specific part of an array (a sub-array)

without actually specifying a manner of reading. As the intended limitation is not clear, claims 1,

5-7, 10-13, and 41-55 are indefinite.

Claim 6 recites the limitation "a sub-array" in line 2. Claim 6 depends from claim 1,

which recites "reading ... signal data for the sub-array." It is not clear whether a sub-array

processed in claim 6 is different from a sub-array read in claim 1. As the intended limitation is

not clear, claim 6 is indefinite. Claims 7 and 10-13 depend from claim 6, and are therefore indefinite.

Claim 7 recites the limitation "the sub-array" in line 2. Claim 7 depends from claims 1 and 6. Claim 1 recites "the sub-array" and claim 6 recites " a sub-array." If sub-arrays recited in claims 1 and 6 are, in fact, different, then it is not clear which sub-array is intended in claim 7. As the intended limitation is not clear, claim 7 is indefinite.

Claim 10 recites the limitation "the sub-array" in line 1. Claim 10 depends from claims 1 and 6. Claim 1 recites "the sub-array" and claim 6 recites " a sub-array." If sub-arrays recited in claims 1 and 6 are, in fact, different, then it is not clear which sub-array is intended in claim 10. As the intended limitation is not clear, claim 10 is indefinite. Claims 11-13 depend from claim 10, and are therefore indefinite.

Claim 12 recites the limitation "transmitting results from acquired signal data only from those feature locations within the received sub-array pattern, as applied to the chemical array." It is not clear what results are transmitted, i.e., results "from acquired signal data," results "only from those array features locations," OR results "from acquired signal data" wherein signal data are "only from those array features locations." The relation of the phrase "as applied to the chemical array" to the rest of the claim is not clear. Specifically, it is not clear whether the phrase relates to results, signal data, array features, or a sub-array pattern. As the intended limitation is not clear, claim 12 is indefinite. Claim 13 depends from claim 12, and is therefore indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6-7, 10-13, 41, 44-45, and 47-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Cattell, U.S. Patent 6, 180,351.

Cattell discloses a method for fabricating, reading, and processing an addressable chemical array (*see*, for example, col. 4, lines 11-43). Cattell discloses a steps of providing a test request for reading or processing signal data (array layout information provided by a user from a remote location, col. 3, lines 1-2, lines 44-46; col. 10, lines 45-53, lines 65-67; claim 1). Cattell discloses a step of retrieving an instruction from a plurality of instructions stored in a memory, wherein each instruction is retrieved with a different test request (col. 5, lines 1-11, col. 12, lines 1-35, fig. 1-3). For example, layout information (instruction) is retrieved from a memory wherein each sub-array location is accompanied by a unique identifier (fig. 1-3 and col. 12, lines 18-35). The array layout information controls the array interrogation, *i.e.*, the layout indicates which array addresses (*i.e.*, sub-arrays) do/do not need to be interrogated (each test request has a different instruction) (col. 12, lines 1-35). Cattell discloses reading or processing signal data for the sub-array according to the retrieved instruction (layout information) (col. 12, lines 1-35; fig. 1-3). Cattell discloses that a program may also control the interrogation or processing

information obtained form an array (co. 5, lines 45-48; col. 12, lines 30-35). Thus, Cattell

anticipates claims 1, 6-7, 10-11, 13, 45, 47, and 50. Cattell discloses transmitting results obtained

from acquired signal data (col. 12, lines 30-35), thereby anticipating claim 12. Cattell discloses

retrieving instructions from a memory using the combination of a test request and an array

identifier (col. 11, line 61 through col. 12, line 35), thereby anticipating claim 41. Cattell

discloses forwarding acquired signal data (raw data) to a remote location for processing and

receiving results based on instructions (layouts) for each test request (col. 12, lines 1-35), thereby

anticipating claim 44. Cattell discloses instructions for processing and interpreting signal data

(col. 12, lines 27-35), thereby anticipating claims 47-48. Cattell discloses obtaining a signal from

a labeled target molecule (col. 1, lines 23-27), thereby anticipating claim 49. Cattell discloses

transmitting results of reading (or alternatively results of the evaluation) to a remote location and

processing the result at the remote location (col. 12, lines 27-35), thereby anticipating claims 51-

52.

Answer to Arguments

Applicants argue that Cattell does not disclose sub-arrays that are read/processed

separately with different instructions retrievable with a different test request. Applicants further

argue that Cattell does not disclose the association of a test request and an array identifier.

Applicants also argue that there are no multiple array layouts for each array feature "12" of fig. 1

in Cattell, and one would read the same features of the array. Applicants' arguments have been

considered, but are found not persuasive.

In response, it is noted that Cattell discloses array layout information (*e.g.*, for feature

"12"on fig. 1) directing a scanner not to interrogate specific array addresses (*i.e.*, addresses that

are scanned or not scanned represent a sub-array) (col. 12, lines 1-35). The layout information is

provided by a user and retrieved from a plurality of instructions stored in a memory, as set forth

above and in the previous office action. Thus, Cattell discloses processing a sub-array and

retrieving instructions stored in a memory with different test requests. Further, specific array

addresses that are not interrogated or addresses to be ignored represent an array identifier for a

given test (col. 12, lines30-35). It is further noted that features "12" on the array of fig. 1 may

have different layout instruction to read different array addresses (*see* col. 12, lines 18-35), and

therefore repetition of the steps of claim 1 does not necessarily mean reading the same features.

Thus, the examiner maintains that Cattell discloses different instructions for reading an array and

the association of a test request and identifier.

Claims 1, 5-7, 10-13, 41, 44-45, and 47-52 are rejected under 35 U.S.C. 102(e) as being

anticipated by Zhou, US 2004/0218795.

Zhou discloses a method of determining feature locations on an array image obtained

from reading a chemical array (abstract). Zhou discloses steps of providing a test request (a user

selected array and sub-array layout information), retrieving different instruction for reading sub-

arrays from a memory, and reading sub-arrays ([0039]-[0042] and [0052]-[0056] and fig. 4-8).

Thus, Zhou anticipates claims 1, 45. Zhou discloses repeating the method steps for sub-arrays on

an array ([0041], [0054], claim 6), thereby anticipating claim 5. Zhou discloses instructions for

processing signal data from a sub-array and receiving the instruction from a memory with a

different test request ([0041], [0052]), thereby anticipating claims 6-7, 10-11, and 13. Zhou

discloses transmitting results acquired from an array to a remote location for processing ([0052]

and claim 10), thereby anticipating claims 12, 44, and 51-52. Zhou discloses a nucleic acid array

with disposed probes wherein a sample is labeled with a fluorescent compound ([0002], [0058]),

thereby anticipating claims 13 and 49. Zhou discloses providing an array identifier and retrieving

instructions based on the identifier and test instruction (an array layout information comprising

an array identifier and sub-array information) ([0041] and [0052]), thereby anticipating claims 41

and 50. Zhou discloses processing signal data (*e.g.*, determining feature locations) (claims 1 and

9; [0039]), thereby anticipating claims 47-48.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 42-43, 46, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Zhou, US 2004/0218795, as applied to claims 1, 5-7, 10-13, 41, 44-45, and 47-52 above, in

view of Venkatesan, U.S. Patent 6,282,550.

Zhou teaches the method of instant claims 1, 5-7, 10-13, 41, 44-45, and 47-52, as set

forth above.

Zhou does not disclose steps of providing account information, transmitting account

information, and providing a requestor with the test price.

Venkatesan disclose a method for providing information to a customer requesting a synthesis of primers, wherein the customer provides a probe identifier (fig. 6A) and requests and receives information via a network (fig. 5). Venkatesan further discloses that a provider may automatically bill a customer via a network (col. 3, line 40-49). In order to bill a customer, the provider has to create an account for the user and adjust the price to the price agreed between the customer and a supplier (col.3, line 27-41). Thus, Venkatesan discloses identifying an account and adjusting the account to product pricing. Venkatesan teaches selling a product to a user base upon the modified price (col. 3-4). Venkatesan teaches remote communication between a provider and a customer (fig. 5).

It would have been obvious to one skilled in the art at the time of the invention to modify the method of Zhou to communicate pricing information to and from a customer ordering a product, to create an account for billing a customer on-line, and to sell a product after a series of modifications conducted on-line, such as taught by Venkatesan, where the motivation would have been to provide an efficient and less time consuming process of buying a biological product to customers, as taught by Venkatesan, col. 1.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Miller whose telephone number is (571)272-6101. The examiner can normally be reached on 8-6, M-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang, Ph. D. can be reached on (571)272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marina Miller
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MARJORIE A. MORAN
PRIMARY EXAMINER

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